

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>RLL - 448WO</b>	<b>FOR FURTHER ACTION</b> <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. <b>PCT/IB2004/003474</b>	International filing date (day/month/year) <b>22/10/2004</b>	(Earliest) Priority Date (day/month/year) <b>22/10/2003</b>
Applicant  <b>RANBAXY LABORATORIES LIMITED</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☒ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/003474

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C07D501/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 2004/111059 A (ORCHID CHEMICALS & PHARMACEUTICALS LTD; DESHPANDE, PANDURANG, BALWANT;) 23 December 2004 (2004-12-23) page 3, line 5 - page 6, line 10; claims 1-6; examples 1,2	1-20
P, X	WO 03/089406 A (ORCHID CHEMICALS AND PHARMACEUTICALS LIMITED; DESHPANDE, PANDURANG, BA) 30 October 2003 (2003-10-30) page 3, line 28 - page 6, line 10; claims 1-15; example 4	1-20
X	WO 03/004477 A (ORCHID CHEMICALS & PHARMACEUTICALS LIMITED; DESHPANDE, PANDURANG, BALW) 16 January 2003 (2003-01-16) pages 4-5; claims 5-12	1-20
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

30 May 2005

Date of mailing of the international search report

14.06.2005

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/003474

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/63214 A (BIOCHEMIE GESELLSCHAFT M B H; GERLACH, BENJAMIN; LUDESCHER, JOHANNES;) 26 October 2000 (2000-10-26) cited in the application page 1 - page 10; claims 1-5 -----	1-20
X	EP 0 842 937 A (HICHEM PHARMA S.P.A; S.B.D. S.R.L) 20 May 1998 (1998-05-20) page 4 - page 5; claims 1,2 -----	1-20
X	EP 0 030 294 A (F. HOFFMANN-LA ROCHE & CO. AKTIENGESELLSCHAFT) 17 June 1981 (1981-06-17) page 1 - page 6, line 30; claims 1-16 -----	1-20
X	EP 0 324 418 A (TAKEDA CHEMICAL INDUSTRIES, LTD) 19 July 1989 (1989-07-19) page 4 - page 9, line 15; claims 2-16; example 3 -----	1-20
X	US 2002/156272 A1 (GERLACH BENJAMIN ET AL) 24 October 2002 (2002-10-24) column 1 - column 7, line 76; examples 1-3 -----	1-12
X	US 2002/028931 A1 (DANDALA RAMESH ET AL) 7 March 2002 (2002-03-07) page 1, column 2, paragraph 11 - page 2, column 2, paragraph 24; examples 1-4 -----	1-20

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB2004/003474

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-20

A process of preparation of ceftriaxone and pharmaceutical compositions comprising it  
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2. claims: 1-20

A process of preparation of cefotaxime and pharmaceutical compositions comprising it  
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2004/003474

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2004111059 A	23-12-2004	WO 2004111059 A1 US 2005027118 A1	23-12-2004 03-02-2005
WO 03089406 A	30-10-2003	AU 2002337437 A1 WO 03089406 A1	03-11-2003 30-10-2003
WO 03004477 A	16-01-2003	WO 03004477 A1 EP 1399429 A1	16-01-2003 24-03-2004
WO 0063214 A	26-10-2000	AT 411598 B AT 412214 B AU 3967000 A WO 0063214 A1 EP 1169324 A1 US 2002156272 A1 US 2002128469 A1 AT 76399 A AT 408225 B AT 1522000 A AT 80099 A	25-03-2004 25-11-2004 02-11-2000 26-10-2000 09-01-2002 24-10-2002 12-09-2002 15-08-2003 25-09-2001 15-02-2001 15-04-2004
EP 0842937 A	20-05-1998	IT MI962406 A1 EP 0842937 A2	19-05-1998 20-05-1998
EP 0030294 A	17-06-1981	AT 8896 T AU 533088 B2 AU 6443880 A CA 1146165 A1 DE 3068905 D1 DK 496380 A EP 0030294 A2 ES 8200694 A1 ES 8204997 A1 FI 793768 A ,B, FI 842614 A ,B, GR 71879 A1 HU 184941 B IE 50516 B1 IL 61486 A JP 1378595 C JP 56092894 A JP 61045995 B JP 1630053 C JP 2048559 B JP 61143392 A KR 8600852 B1 NO 803516 A ,B, NO 812083 A ,B, NZ 195547 A PH 17359 A PH 18468 A PT 72084 A ,B SI 8012952 A8 YU 295280 A1 ZA 8007099 A	15-08-1984 27-10-1983 28-05-1981 10-05-1983 13-09-1984 22-05-1981 17-06-1981 01-02-1982 01-09-1982 22-05-1981 28-06-1984 03-08-1983 28-11-1984 30-04-1986 30-04-1984 08-05-1987 27-07-1981 11-10-1986 20-12-1991 25-10-1990 01-07-1986 09-07-1986 22-05-1981 22-12-1981 10-05-1983 01-08-1984 18-07-1985 01-12-1980 30-06-1997 30-06-1983 25-11-1981
EP 0324418 A	19-07-1989	JP 1230547 A CN 1035283 A	14-09-1989 06-09-1989

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2004/003474

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0324418	A	CN 1124737 A	19-06-1996
		EP 0324418 A2	19-07-1989
		HU 49884 A2	28-11-1989
		HU 202184 B	28-02-1991
		US 5109131 A	28-04-1992
		US 5183929 A	02-02-1993
US 2002156272	A1	24-10-2002	AT 411598 B
			AT 412214 B
			AU 3967000 A
			WO 0063214 A1
			EP 1169324 A1
			US 2002128469 A1
			AT 76399 A
			AT 408225 B
			AT 1522000 A
			AT 80099 A
US 2002028931	A1	07-03-2002	NONE